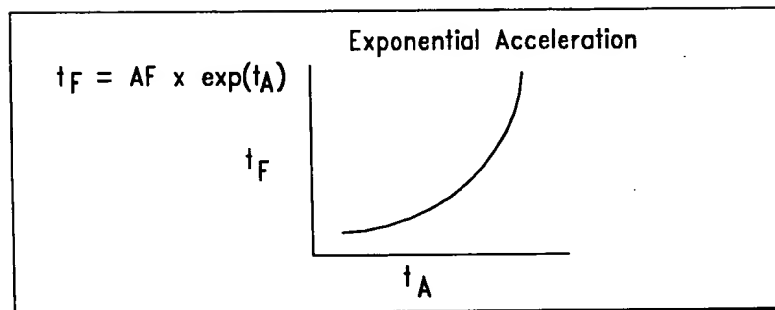
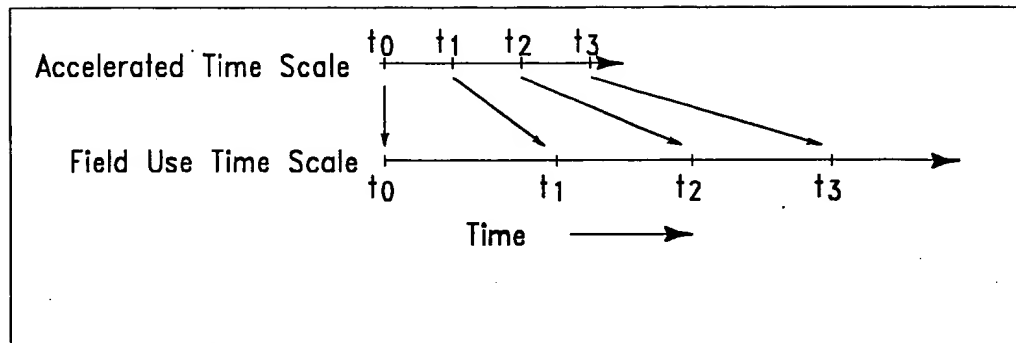
**FIG. 1** PRODUCT CYCLE**FIG. 2** Exponential Acceleration



Correlation between Accelerated and Field Use Time Scales

FIG. 3

<u>Unit A</u>	CSS	HSS	RT	Vib	CE	Average Time to Failure	$\lambda$
HALT 1 First Failure (time to failure in hours)	2	1.35	0.23	0.88	0.925	1.077	0.929
HALT 2 First Failure (time to failure in hours)	1.525	1.51	1.05	1.38	1.45	1.383	0.723

$\bar{R}^*$  (see eq. 6) 0.306

$\bar{R}$  (see eq. 7) 1.36 ← ESTIMATE FOR RELATIVE LIFE  $R$

BOM MTBF 298462

MTBF for Redesigned Unit (see eq. 12) 405908

VAR ( $\bar{R}^*$ ) = 0.614

90% Confidence Limits for  $\bar{R}^*$  (see eq. 10)

Lower Limit -0.98  
Upper Limit 1.59

90% Confidence Limits for  $R$  (see eq. 11)

Lower Limit 0.374  
Upper Limit 4.9000

FIG. 4

<u>Unit B</u>	CSS	HSS	RT	Vib	CE	Average Time to Failure	$\lambda$
HALT 1 First Failure (time to failure in hours)	1.23	1.38	1.38	1.48	0.18	1.13	.88
HALT 2 First Failure (time to failure in hours)	2.03	1.38	.225	1.83	.225	1.14	.88

$\bar{R}^*$  (see eq. 6) 0.0

$\bar{R}$  (see eq. 7) 1.0 ← ESTIMATE FOR RELATIVE LIFE R

BOM MTBF 232000

MTBF for Redesigned Unit 232000  
(see eq. 12)

VAR ( $\bar{R}^*$ ) = 0.516

90% Confidence Limits for  $\bar{R}^*$   
(see eq. 10)

Lower Limit -1.18  
Upper Limit 1.18

90% Confidence Limits for R  
(see eq. 11)

Lower Limit 0.306  
Upper Limit 3.250

FIG. 5

<u>Unit C</u>	CSS	HSS	RT	Vib	CE	Average Time to Failure	$\lambda$
HALT 1 First Failure (time to failure in hours)	1.48	1.20	0.55	1.22	0.81	1.05	0.95
HALT 2 First Failure (time to failure in hours)	1.87	1.30	1.67	1.06	0.33	1.25	0.80

$\bar{R}^*$  (see eq. 6) 0.20

$\bar{R}$  (see eq. 7) 1.22 ← ESTIMATE FOR RELATIVE LIFE R

BOM MTBF 363300

MTBF for Redesigned Unit 443226  
(see eq. 12)

VAR ( $\bar{R}^*$ ) = 0.53

90% Confidence Limits for  $\bar{R}^*$   
(see eq. 10)

Lower Limit -.99  
Upper Limit 1.39

90% Confidence Limits for R  
(see eq. 11)

Lower Limit 0.368  
Upper Limit 4.010

FIG. 6